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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Re Application of: Pihl et al.	:	Attorney Docket No.: 944-003.090
Serial No.: 09/939,058	:	Examiner: Danh C. Le
Filed: August 24, 2001	:	Art Unit: 2683

For: METHOD OF LOCATING A MOBILE STATION BASED ON OBSERVED TIME DIFFERENCE

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO NON-FINAL OFFICE ACTION (Paper No. 8)

Sir:

This responds to the Non-Final Office Action, mailed September 22, 2004.

In the patent application, claims 1-16 are pending. In the office action, claims 1-8, 15 and 16 are rejected and claims 9-14 are objected to but would be allowable if rewritten in independent form.

At section 1, claims 1, 2, 4-6, 8 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Watters et al.*(U.S. Patent No. 6,236,359, hereafter referred to as *Watters*) in view of *Holt* (U.S. Patent No. 6,677,895).

I hereby certify that this correspondence is being deposited today, December 3, 2004, with the United States Postal Service with sufficient postage as first-class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Cathy Sturmer

In rejecting claim 1, the Examiner admits that *Watters* fails to disclose at least one second base station, but points to *Holt* for disclosing the second base station (col.4, line 60 to col.5, line 15).

We disagree with the Examiner. *Watters* sets out to solve the problem of not having four GPS satellites in clear view of a GPS receiver. *Watters* solves the problem by collecting and using DGPS (Differential GPS) error correction information (col.7, lines 59-65). *Holt* also sets out to solve the problem of not having good GPS reception in certain areas such as urban areas. *Holt* solves the problem by having a different type of receiver (non-GPS based) in the poor GPS reception areas to measure the angle of arrival and/or the time of arrival, multipath profile or other characteristics of transmitted signals from the mobile unit. According to *Holt*, the receivers that have good GPS reception form a first infrastructure and the non-GPS receivers in the poor GPS reception area form a second infrastructure. When the mobile terminal is in the poor GPS reception area, a processor is used to determine the location of the mobile terminal unit based on the measured time of arrival and/or the angle of arrival (see Abstract; col.2, lines 2-19). Thus, *Holt* uses GPS receivers in the first infrastructure and non-GPS receivers in the second infrastructure. However, these infrastructures belong to the same network operator.

In contrast, the claimed invention relies on both the first and the second base stations to provide measurement information related to arrival of signals to the mobile station. The first base stations and the second base stations are of the same type but belong to different network operators.

In fact, the present invention sets out to solve a different problem. The present invention solves the problem in that one operator does not have enough base stations in a certain area. That operator has to rely on the base stations in the same area but belonging to another operator.

Thus, the cited *Watters* and *Holt* references are irrelevant to claim 1.

As for claims 2, 4-6, 8 and 15, they are dependent from claim 1 and recite features not recited in claim 1. For the reasons regarding claim 1 above, it is respectfully submitted that claims 2, 4-6, 8 and 15 are also distinguishable over the cited *Watters* and *Holt* references.

At section 2, claims 3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Watters*, in view of *Holt* and further in view of *Weill et al.* (U.S. Patent No. 6,246,361, hereafter referred to as *Weill*). The Examiner points to *Weill* for disclosing measurement information that includes geometric time-difference between the arrival time of signals

transmitted from two of the first or second stations. However, *Weill* does not disclose or suggest using base stations of different operators. Thus, claims 3 and 7 are distinguishable over the cited *Watters*, *Holt* and *Weill* references.

At section 3, claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Watters*, in view of *Holt* and further in view of *Yang et al.* (U.S. Patent No. 6,785,321, hereafter referred to as *Yang*). The Examiner points to *Yang* for disclosing triangulation based location calculation. However, *Yang* does not disclose or suggest using base stations of different operators. Thus, claim 6 is distinguishable over the cited *Watters*, *Holt* and *Yang* references.

At section 4, claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Watters*, in view of *Holt* and further in view of *Edge* (U.S. Patent No. 6,597,916). The Examiner points to *Edge* for disclosing IPDL OTDOA. However, *Edge* does not disclose or suggest using base stations of different operators. Thus, claim 16 is distinguishable over the cited *Watters*, *Holt* and *Edge* references.

In sum, claims 1-8, 15 and 16 are distinguishable over the cited *Watters*, *Holt*, *Weill*, *Yang* and *Edge* references.

CONCLUSION

Claims 1-8, 15 and 16 are allowable over the cited references. Claims 9-14 are objected to but would be allowable if rewritten in independent form. Early allowance of all pending claims is earnestly solicited.

Respectfully submitted,

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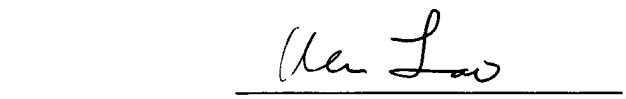

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